Louisville Metro Air Pollution Control District
701 West Ormsby Avenue
Louisville, Kentucky 40203-3137

Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: 111-01-F(R7) Plant ID: 0115

Effective Date: 1/22/2014 Expiration Date: 1/31/2019

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Owner/Source: Swift Pork Company
1200 Story Avenue
Louisville, KY 40206

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve (12) months and no later than ninety (90) days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant:	SO_2	NO_X	VOC	PM_{10}	CO_2e	CO
Tons/year:	≤50	≤50	<22.0	<50	<100,000	<50

Application No. 27650
74544; 74736;
75675; 75869

Application Received: 5/20/2013;
12/04/2015; 01/04/2016;
02/29/2016; 03/14/2016

Permit Writer: Randy Schoenbaechler

Public Notice Date: 5/25/2013; 03/15/2016

Paul G. Add

igned by Pa

Air Pollution Control Officer
May 10, 2016

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Permit Revisions/Changes

Revision No.	Issue Date	Public Notice Date	Type	Page No.	Description
N/A	9/9/2002	7/28/2002	Initial	Entire Permit	Initial Permit Issuance
Rev. 1	1/13/2003	11/17/2002	Admin	Entire Permit	Name Change
Rev. 2	6/30/2008	5/14/2007	Renewal	Entire Permit	Scheduled 5 yr Permit Renewal. Incorporate permit 398-05-C.
Rev. 3	2/9/2009	12/23/2008	Significant	Entire Permit	Revised monitoring, record keeping, and reporting requirements due to compliance issues. Incorporate permit 637-07-C.
Rev. 4	1/22/2014	5/25/2013	Renewal	Entire Permit	Scheduled 5 yr Permit Renewal. Incorporate permit 788-08-C, 43-09-C, 65-09-C, 69-09-C, 83-09-C, 33252-11-C(R1).
Rev. 5	11/03/2015	N/A	Admin	Page 33 and 41	Add the minimum flow rate for C4 venturi scrubber and removed the one time reporting requirement to establish the minimum flow rate.
Rev. 6	12/03/2015	N/A	Admin	Cover Page	Corrected Company Name

Revision No.	Issue Date	Public Notice Date	Type	Page No.	Description
Rev. 7	5/10/2016	3/15/2016	Significant	Emission Unit U2, U3, and U4; standards, monitoring, record keeping, and reporting for VOCs and Odor	Addition of Unit Operation Limit with associated monitoring, record keeping and reporting in order to validate September 2013Stack Test. Removal of water flow rate monitoring and record keeping for the Dupps cooker and Hair Hydrolyzer. Clarification of temperature requirements for the blood dryer. Incorporate construction permit C-0115-1003-16-F for the new blood dryer. Clarified Regulation 7.25 requirements in Unit 2, Unit 3, and Unit 4. Adding minimum flow rate and maximum residual free chlorine concentration of 20K scrubber for Unit 3.

Acronyms and Abbreviations

ACFM - Actual Cubic Feet per Minute
AP-42 - AP-42, Compilation of Air Pollutant Emission Factors, published by USEPA
APCD - Louisville Metro Air Pollution Control District
BAC - Background Ambient Concentration
BACT - Best Available Control Technology
Btu - British thermal unit
CEMS - Continuous Emission Monitoring System
CFR - Code of Federal Regulations
CO - Carbon monoxide
District - Louisville Metro Air Pollution Control District
EA - Environmental Acceptability
FEDOOP - Federally Enforceable, District Origin Operating Permit
gal - U.S. fluid gallons
GHG - Greenhouse Gas
HAP - Hazardous Air Pollutant
HCl - Hydrogen chloride
Hg - Mercury
hr - hour
in. - inches
lbs - pounds
l - liter
LMAPCD - Louisville Metro Air Pollution Control District
mm_{Hg} - millimeters of mercury column height
MM - million
NAICS - North American Industry Classification System
NO_x - Nitrogen oxides
PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns
$PM_{2.5}$ - Particulate Matter less than 2.5 microns
ppm - parts per million
PSD - Prevention of Significant Deterioration
psia - pounds per square inch absolute
QA - Quality Assurance
SCFM - Standard Cubic Feet per Minute
SIC - Standard Industrial Classification
SIP - State Implementation Plan
SO_2 - Sulfur dioxide
STAR - Strategic Toxic Air Reduction
TAC - Toxic Air Contaminant
UTM - Universal Transverse Mercator
VOC - Volatile Organic Compound
w.c. - water column
WG - Water Gauge
year - any period of twelve consecutive months, unless "calendar year" is specified
yr - year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of applicable fees is not made after receipt of the statement of fees (SOF). The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.

2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.

3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-0.

5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.

6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.

8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or an anticipated noncompliance shall not alter any permit requirement.

9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.

10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter PM_{10}, sulfur dioxide, carbon monoxide, photochemical oxidants, hydrocarbons, nitrogen oxides, lead, gaseous fluorides, or Volatile Organic Compounds (VOC) as listed in District Regulation 3.04; any pollutant subject to any standard in District Regulation 7.02; any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA; or any combination of greenhouse gasses whose combined global warming potential equals or exceeds 100,000 tons CO_2-equivalent, as defined in 40 CFR 98 (except that prior to July 21, 2014, the mass of the greenhouse gas carbon dioxide shall not include biogenic carbon dioxide emissions defined in 40 CFR 52.21(b)(49)(ii)(a)). Fugitive emissions shall be included in these limits.

11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.

12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All annual compliance reports shall include the statement "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete" and the signature and title of a responsible official of the company. The report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report.

13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emissions Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
4.01	General Provisions for Emergency Episodes

Regulation	Title
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Fees
5.00	Definitions
5.01	General Provisions (Standards for Toxic Air Contaminants and Hazardous Air Pollutants)
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.

16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.

17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

Air Pollution Control District
Room 205
850 Barret Ave
Louisville, KY 40204-1745

Plant-wide Limits

Plant-wide Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permit	All

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.13	Control of Objectionable Odors in the Ambient Air	1 through 3
1.14	Control of Fugitive Particulate Emissions	1, 2, 3, 4, 8, 9

Plant-wide Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **VOC**

The owner or operator shall limit the plant-wide VOC emissions to less than 22.0 tons per consecutive 12-month period. (Regulation 2.17, section 5.1)

b. **NO_X**

The owner or operator shall not allow or cause the plant-wide NOx emissions to exceed 50 tons during any consecutive 12-month period. (Regulation 2.17, section 5.1)

c. **SO_2**

The owner or operator shall not allow or cause the plant-wide SO_2 emissions to exceed 50 tons during any consecutive 12-month period. (Regulation 2.17, sections 5.1)

d. **PM_{10}**

The owner or operator shall limit the plant-wide PM_{10} emissions to less than 50 tons per consecutive 12-month period. (Regulation 2.17, section 5.1)

e. **CO**

The owner or operator shall limit the plant-wide CO emissions to less than 50 tons per consecutive 12-month period. (Regulation 2.17, section 5.1)

f. **GHG**

The owner or operator shall limit the plant-wide CO_2e emissions to less than 100,000 tons per consecutive 12-month period. (Regulation 2.17, section 5.1) (See Plant-Wide Comment 3)

g. **Odor**

The owner or operator shall not emit or cause to be emitted into the ambient air any substance that creates an objectionable odor beyond the facility's property line. An odor will be deemed objectionable when document investigation by the District includes, as a minimum, observations on the odor's nature, intensity, duration, and location, and evidence that the odor causes injury, detriment, nuisance, or annoyance to person or to the public. (Regulation 1.13, Section 2.1)

h. **Fugitive Particulate**

i. PM

The owner or operator shall not allow a road to be used without taking reasonable precautions to prevent particulate matter from becoming airborne beyond the work site. Such precautions shall include, where

applicable, but shall not be limited to the following: (Regulation 1.14, section 2.1)

1) Applying and maintaining asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts, (Regulation 1.14, section 2.1.2)

2) Covering at all times, except when loading and unloading, open bodied trucks transporting materials likely to become airborne, (Regulation 1.14, section 2.1.4)

3) Maintaining paved roadways in a clean condition, (Regulation 1.14, section 2.1.6)

4) Removing earth or other material from paved streets which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water. (Regulation 1.14, section 2.1.7)

ii. Opacity

1) The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. (Regulation 1.14, section 2.3)

2) The owner or operator shall not allow visible fugitive emissions beyond the lot line of the property on which the emissions originate. (Regulation 1.14, section 2.4)

i. **Unit Operation**

The owner or operator shall limit the number of hogs processed each day to no more than 10,500. (Regulation 2.17, section 5.1)

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

a. **VOC**

The owner or operator shall maintain monthly records, including calculations that show the plant-wide calendar month and consecutive 12-month VOC emissions.

b. **NO_X**

i. The owner or operator shall maintain monthly records, including calculations that show the plant-wide calendar month and consecutive 12-month NO_X emissions.

ii. The owner or operator shall monitor and maintain records of the plant-wide quantity and type of each fuel combusted during each calendar month and each consecutive 12-month period.

c. **SO_2**

The owner or operator shall maintain monthly records, including calculations that show the plant-wide calendar month and consecutive 12-month SO_2 emissions.

d. **PM_{10}**

The owner or operator shall maintain monthly records, including calculations that show the plant-wide calendar month and consecutive 12-month PM_{10} emissions.

e. **CO**

The owner or operator shall maintain monthly records, including calculations that show the plant-wide calendar month and consecutive 12-month CO emissions.

f. **GHG**

The owner or operator shall maintain monthly records, including calculations that show the plant-wide calendar month and consecutive 12-month CO_2e emissions.

g. **Odor**

i. The owner or operator shall keep a log for odor complaints. For any odor complaint the owner or operator shall maintain the following records.

1) The date and time of the complaint or odorous event;

2) A description of the nature of the complaint including the character, time and duration of the event and, if known, the wind direction at the time of the complaint;

3) Summary information on any causes or reasons determined for each event,

4) Corrective action taken to minimize the extent of each event, and

5) Any measures implemented to prevent reoccurrence.

ii. The owner or operator shall daily conduct a survey for odors around the plant property line during normal process operation and keep a log of the survey results including the following records.

1) The date and time of the survey with the name of the person that conducted the survey;

2) A description of the nature of any odorous event, including the character, time and duration of the event and, if known, the wind direction at that time;

3) Summary information on any causes or reasons determined for each event,

4) Corrective action taken to minimize the extent of each event, and

5) Any measures implemented to prevent reoccurrence.

iii. The owner or operator shall notify the District of any odor complaints within one business day of receiving the complaint.

h. **Fugitive Particulate**

See attached Fugitive Dust Control Plan. (See Comment 4)

i. **Unit Operation**

The owner or operator shall maintain daily records that show the number of hogs processed.

S3. **Reporting (Regulation 2.17, section 5.2)**

The owner or operator shall submit annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.17, section 3.5.

- "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete".
- Signature and title of the responsible official of the company.

The annual compliance report is due on or before the following date of each calendar year: (See Plant-wide Comment 1)

Reporting Period	Report Due Date
January 1st through December 31st	March 1st

The annual compliance certification is due on or before the following date of each calendar year: (See Plant-wide Comment 2)

Reporting Period	Report Due Date
January 1st through December 31st	April 15th

If a change in the "Responsible Official" (RO) occurs during the term of this permit, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days following the date a change in the designated RO occurs for this facility.

a. **$VOC/NO_X/SO_2/PM_{10}/CO/GHG$**

i. Identification of all periods of exceedances of the plant-wide limits including the quantity of excess emissions;

ii. The monthly and 12 consecutive month plant-wide emissions;

iii. Reason for any excess emissions; and

iv. Description of corrective actions taken to prevent future exceedances, or

v. A negative declaration if no excess emissions occurred.

b. **Odor**

The owner or operator shall report the odor log and survey information recorded in S2.g.i.1) through S2.g.i.5) and S2.g.ii.1) through S2.g.ii.5). If there were no odorous events recorded during a reporting period, the compliance report must include a statement that there were no odorous events recorded during the reporting period.

c. **Fugitive Particulate**

The owner or operator shall report any deviation from the attached Fugitive Dust Control Plan during the reporting period.

d. **Unit Operation**

The owner or operator shall report the following:

i. Identification of all periods of exceedance of the 10,500 hogs processed per day.
ii. A negative declaration if no exceedance occurred.

Plant-wide Comments

1. The Annual Compliance Report is due each year and shall include all emissions and throughput data required to be reported by the permit to show compliance with the standards of the permit.

2. The Annual Compliance Certification is due each year and shall include the information required in the FEDOOP Annual Compliance Certification form 9440-O.

3. The source has taken a limit of less than 100,000 tpy of CO_2e in order to not be a major source for GHG's.

4. Swift submitted a plant-wide Fugitive Dust Control Plan on October 12, 2010 and the District approved the plan on December 28, 2010. See Attachment.

5. The September 24 through 27, 2013 stack test was based 87% or more of the maximum number of hogs processed per day. The District has determined that number of hogs processed per day needs to be a permit limit in order for the test to be valid.

Emission Unit U1

U1 Unit Description: Four (4) Boilers

U1 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permit	All
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3, 4.1.3, 4.2, 5.1.1 and 8
40 CFR 60 Subpart A	General Provisions	60.1 through 60.19
40 CFR 60 Subpart D_C	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	60.40c(a), 60.41c, 60.42c(h)(1), 60.43c(c) & (d), 60.44c(g), 60.44c(h), 60.45c, 60.46c(e), 60.48c(e)(11) 60.48c(f) & (g)

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	All
5.01	General Provisions	1 through 4
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Adoption of Federal New Source Performance Standards	3.11

U1 Equipment

Emission Point	P/PE	Description	Applicable Regulation	Control ID	Stack ID
E2	144-81	One (1) 26 MMBtu/hr Water-tube Boiler #2 Babcock & Wilcox 1981	2.17, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.06	N/A	S6
E3	145-81	One (1) 25.1 MMBtu/hr Water-tube Boiler #3 (East Unit) Cleaver Brooks 1981	2.17, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.06	N/A	S7
E4	69-07	One (1) Nebraska 90 MMBtu/hr Boiler, Model NOS-2AS64 2005	2.17, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.06, 40 CFR 60, Subpart D_C	N/A	S8
E18	83-09	One (1) 63.0 MMBtu/hr boiler. Fuels: Natural Gas, No. 2 Fuel Oil, Animal Fat (pork grease) Manufacturer: York Shipley Model: 5112L-2D-1500X-S300	2.17, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.06, 40 CFR 60, Subpart D_C	N/A	S9

U1 Control Devices

There are no control devices associated with Emission Unit U1.

U1 Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **SO_2**

i. The owner or operator shall comply with the following SO_2 emission standards: (Regulation 7.06, section 5.1)

Equipment	Emission Standard (lb/MMBtu)
63.0 MMBtu/hr Boiler	0.869
26.0 MMBtu/hr Boiler	1.0
25.1 MMBtu/hr Boiler	1.0
90.0 MMBtu/hr Boiler	0.868

ii. The owner or operator shall limit the plant-wide quantity of No. 2 fuel oil combusted to 1,375,000 gallons during any consecutive 12-month period and 114,585 gallons during any calendar month. (Regulation 2.17, section 5.1)

iii. The sulfur content of the No. 2 fuel oil shall not exceed 0.50% by weight. (Regulation 2.17, section 5.1)

iv. The owner or operator shall only use natural gas, No. 2 fuel oil, or animal fat (produced on-site only) as fuels at this plant. (Regulation 2.17, section 5.1)

b. **$PM/PM_{10}/PM_{2.5}$**

i. The owner or operator shall comply with the following PM emission standards: (Regulation 7.06, section 4.1)

Equipment	Emission Standard (lb/MMBtu)
63.0 MMBtu/hr Boiler	0.111
26.0 MMBtu/hr Boiler	0.151
25.1 MMBtu/hr Boiler	0.151
90.0 MMBtu/hr Boiler	0.111

ii. The animal fat (produced on-site only) shall be heated to a minimum temperature of 160°F when used as an alternative fuel in each boiler. (Regulation 1.13)

iii. The PM standard shall apply at all times, except during periods of startup, shutdown, or malfunction. [40 CFR 60.43c(d)]

iv. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the District which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40CFR

60.11(d)]

c. **Opacity**

i. The owner or operator shall not allow or cause the visible emissions to exceed 20% opacity except: (Regulation 7.06, section 4.2)

1) For indirect heat exchangers with a heat input capacity of less than 250 million BTU/hr, a maximum of 40% opacity shall be permissible for not more than two consecutive minutes in any 60 consecutive minutes;

2) For indirect heat exchangers with heat input capacity of less than 250 million BTU/hr, a maximum of 40% opacity shall be permissible for not more than six consecutive minutes in any 60 consecutive minutes during cleaning the fire box or blowing soot; or

3) For emissions from an indirect heat exchanger during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

ii. No owner of operator of an affected facility that can combust coal, wood, or oil and has a heat input capcity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gasses that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43c(c)]

iii. The opacity standards apply at all times, except during periods of startup, shutdown, or malfunction. [40 CFR 60.63c(d)]

d. **TAC**

i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. (Regulations 5.00 and 5.21) (See U1 Comment 3 and 6)

ii. The owner or operator shall combust only the fuel types specified in Specific Condition S1.b.v. (Regulations 5.00, 5.20, 5.21, 5.23)

iii. The owner or operator shall comply with fuel oil combustion limits in S1.a.ii. (Regulations 5.00, 5.20, 5.21, 5.23)

e. **Unit Operations**

i. The owner or operator shall combust liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. (Subpart JJJJJJ §63.11237) (See U1 Comment 2)

ii. The owner or operator shall not exceed a combined total of more than forty-eight (48) hours of operation during a calendar year of liquid fuel testing, for each boiler. (Subpart JJJJJJ §63.11237) (See U1 Comment 2)

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

The owner or operator shall maintain, at the facility, the required records for a minimum of five (5) years and make the records readily available to the District upon request.

a. **SO_2**

i. The owner or operator shall monitor and maintain records of the plant-wide quantity and type of each fuel combusted during each calendar month and each consecutive 12-month period.

ii. For each delivery of No. 2 fuel oil, a laboratory analysis or supplier certification shall be maintained to verify the fuel oil sulfur content (% by wgt).

iii. For the Nebraska and York Shipley boilers, the owner or operator shall maintain the following records to demonstrate ongoing compliance with the SO_2 emission standard:

1) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2). [40 CFR 60.44c(g)]

2) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f)(1), (2), or (3), as applicable. [40 CFR 60.44c(h)]

3) The owner or operator shall maintain the following records to demonstrate ongoing compliance with the terms and conditions of this permit:

(a) Monthly records of the quantity and type of each fuel combusted during each calendar month;

(b) Daily records of the hours of operation; and

(c) Laboratory analysis or supplier certification that shows the fuel oil sulfur content for each shipment of No. 2 fuel oil. The records shall include the name of the oil supplier and a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c.

b. **$PM/PM_{10}/PM_{2.5}$**

The owner or operator shall monitor and record the temperature of the animal fat (produced on-site only) at the inlet to the boiler at least once every 8 hours when combusting animal fat as an alternative fuel in each boiler.

c. **Opacity**

i. For each PM emission point, the owner or operator shall conduct a monthly one-minute visible emissions survey during normal process operation and daylight hours when combusting natural gas as fuel. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For each PM emission point, the owner or operator shall conduct a weekly one-minute visible emissions survey during normal process operation and daylight hours when combusting No. 2 fuel oil or animal fat as fuel. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iv. The owner or operator shall maintain weekly (or monthly as required) records that show the results of all visible emissions surveys and Method 9 tests performed. The records of the results of each visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was taken to minimize visible emissions. If an emission point is not being operated during a given week (or month as required), then no visible emission survey is required to be performed and a negative declaration shall be entered in the record.

d. **TAC**

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases.

iii. See S2.a.i.

e. **Unit Operation**

i. The owner or operator shall record, for each boiler, all hours of operation while combusting No. 2 fuel oil, during times of natural gas curtailment or natural gas emergencies, to show compliance with S1.e.i.

ii. The owner or operator shall calculate and record monthly, for each boiler, the monthly and calendar year-to-date total hours of operation when combusting No. 2 fuel oil, during the liquid fuel operation testing, to show compliance with S1.e.ii.

iii. The following emission factors shall be used to determine actual emission rates for the boilers, unless more accurate District approved emission factors become available.

Fuel	NO_x	SO_2	PM	PM_{10}	$PM_{2.5}$	CO	VOC	CO_2	CH_4	N_2O
Natural Gas (lb/mmcf)	100	0.6	7.6	7.6	7.6	84	5.5	120000	2.3	2.2
#2 Fuel Oil (lb/1000 gal)	20	71	2	1	0.25	5	0.556	22300	0.052	0.26
Animal Fat (lb/1000 gal)	24	0.07	10	10	10	4	0.5	25919.7	0.052	0.26

For each pollutant,
(Emission Factor)* (Fuel Usage/month)*(ton/2000 lb) = Emissions (in ton/month)
For Example:
(100 lb/mmcf)*(25 mmcf/month)*(ton/2000 lb) = 1.25 ton/month
For Greenhouse Gases (GHG) limit,
(Emissions of CO_2) + 23*(Emissions of CH_4) + 310*(Emissions of N_2O) = Emissions of CO_2e
For Example:
(5,000 ton/month) + 23*(10 ton/month) + 310*(1 ton/month) = 5540 ton/month

S3. **Reporting (Regulation 2.17, section 5.2)**

The owner or operator shall include the following information in the annual compliance report.

a. **SO_2**

The owner or operator shall report the following information regarding SO_2 emissions:

i. The plant-wide quantity (in gallons) of No. 2 fuel oil combusted during each month in the reporting period;

ii. The plant-wide consecutive 12-month quantity (in gallons) of No. 2 fuel oil combusted for each month in the reporting period;

iii. Identification of any periods of exceeding the fuel oil sulfur limit specified in Specific Condition S1.b.iv including the quantity of fuel oil combusted that exceeded the 0.50% by weight sulfur limit. The report shall also include the emissions of SO_2 during any periods that the fuel oil sulfur content exceeded 0.50% by weight. If there are no periods of exceeding the fuel oil sulfur limit, the owner or operator shall submit a negative declaration stating that all No. 2 fuel oil combusted during the reporting period met the fuel oil sulfur limit specified in this permit; and

iv. The compliance reports shall include a certified statement signed by the owner or

operator that the records of fuel oil supplier certifications represent all of the fuel oil combusted during the reporting period.

b. **$PM/PM_{10}/PM_{2.5}$**

The owner or operator shall report the following information regarding PM emissions:

i. Any deviation from the requirement to record the temperature of the animal fat as required by Specific Condition S2.b.; and

ii. Any deviation from the requirement to record the results of the temperature measurements.

c. **Opacity**

The owner or operator shall report the following information regarding Opacity emissions:

i. Any deviation from the requirement to perform visible emission surveys or Method 9 tests;

ii. Any deviation from the requirement to record the results of each VE survey and Method 9 test performed;

iii. The number, date, and time of each VE Survey where visible emissions were observed and the results of the Method 9 test performed;

iv. Identification of all periods of exceeding the opacity standard; and

v. Description of any corrective action taken for each exceedance of the opacity standard.

d. **TAC**

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 through 4.24)

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material

iv. See S3.a.ii.

U1 Comments

1. The potential uncontrolled SO_2 and PM emissions using the applicable AP-42 emission factors demonstrate that the SO_2 and PM emission standards specified in Regulation 7.06 cannot be exceeded when combusting natural gas, fuel oil, or animal fat; therefore, no additional monitoring, record keeping, and reporting is required for purposes of demonstrating ongoing compliance with Regulation 7.06.

2. 40 CFR 63 Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources emission standards are not applicable by definition. §63.11195 lists boilers not subject to the subpart and §63.11195(e) states "A gas fired boiler as defined in this subpart." §63.11237 defines a gas fired boiler as "Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year."

3. Based on the Environmental Acceptability Demonstration submitted by the Company on September 30, 2008 the boilers meet regulatory Risk and Hazard Quotient limits for the TACs Formaldehyde and Cobalt compounds with a fuel throughput limit of less than or equal to 2.6 million gallons of No. 2 fuel oil.

4. In accordance with 40 CFR Part 60, Subpart Dc, section 60.43c(e)(4), any affected facility that combusts oil that contains no more than 0.50% by weight sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under 60.63c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2 emissions is not subject to the PM limit in section 60.43c.

5. The District has performed one-time PM and SO_2 compliance demonstration for the York Shipley boiler using AP-42 emission factors. The emission standards cannot be exceeded for any of the three fuel types provided the terms and conditions of this permit are met.

6. The potential uncontrolled emissions of all toxic air contaminants (TAC) from the York Shipley boiler comply with the emission standards specified in District regulations 5.01 and 5.21. Screen3 modeling was performed by the District to determine Environmental Acceptability (EA) per District regulation 5.21, section 2.2 for all TACs which exceeded the de minimis values established pursuant to Regulation 5.20. In general, the STAR Program goal is for the calculated RC or HQ to be equal to or less than the associated EAG. For the York Shipley boiler when combusting No. 2 fuel oil, the EAGC was less than 1.0 for each individual TAC on non-industrial property and less than 10 on industrial property. The cumulative Risk (single process/all TACs) was less than 3.8 on non-industrial property and less than 38 on industrial property. The individual and cumulative HQ was less than 1.0 on both non-industrial and industrial property.

7. The District has determined that the small natural gas fired boilers will meet the 20% opacity standard by design. The company is not required to perform periodic Visible Emissions Surveys and/or Method 9 Tests to demonstrate continuous compliance with the opacity standard when combusting natural gas in the York Shipley boiler.

8. The Method 9 Test was performed on 9/9/2010 and demonstrated compliance with 20% opacity in accordance with the NSPS.

Emission Unit U2

U2 Unit Description: Inedible Rendering Operation

U2 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permit	All
7.08	Standards of Performance for New Process Operations	1, 2, 3 and 5
7.09	Standards of Performance for New Process Gas Streams	1, 2, and 3
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1 through 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.13	Control of Objectionable Odors in the Ambient Air	1 through 3
5.00	Definitions	All
5.01	General Provisions	1 through 4
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U2 Equipment

Emission Point	P/PE	Description	Applicable Regulation	Control ID
E5	477-91	One (1) Holding Tank	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.25	C4, C8, C6
E6		One (1) Blood Coagulator	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.25	C4, C8, C6
E7		One (1) Centrifuge	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.25	C4, C8, C6
E8		One (1) Blood Dryer (1,550 lb/hr output) 1991	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.09, 7.25	C4, C8, C6
E8a		One (1) Process Cyclone Separator (1,550 lb/hr) 2016	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.25	C4, C8, C6
E8b		One (1) Process Cyclone Separator (1,550 lb/hr) 2016	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.25	C4, C8, C6
E8c		One (1) Process Cyclone Separator (1550 lb/hr) 2016	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.25	C4, C8, C6
E11		One (1) Hair Hydrolyzer (4,000 lb/hr) 1992	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.25	C3, C13, CE4 or CE18, C4, C8, C6
E12	1-01	One (1) Hammer Mill (15,000 lb/hr) 2001	1.13, 5.00, 5.01, 5.20, 5.21,5.22, 5.23, 7.08, 7.25	C4, C8, C6
E13		One (1) Grinder and One (1) Surge Hopper (11,000 lb/hr) 2001	1.13, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.25	C4, C8, C6
E14		One (1) Dupps Continuous Cooker (25,000 lb/hr finished product) 2001	1.13, 5.00, 5.01, 5.20, 5.21,5.22, 5.23, 7.08, 7.25	C12, C13, CE4 or CE18, C4, C8, C6

U2 Control Devices

ID	P/PE	Stack ID	Description	Control Efficiency
C3	89-92	S8, S9, or S10	One (1) Direct Contact Condenser	59.0% - VOC
C4	78-92	S10	One (1) Venturi Scrubber	Combined efficiency with the 40K Scrubber for VOC 75% - PM
C6	341-95	S4	One (1) 75K CFM Packed-bed Scrubber (Large Room-Air)	82.2% - VOC 75% - PM
C12	69-09	S8, S9, or S10	One (1) 3,000 CFM Shell & Tube Condenser	97.9% - VOC

ID	P/PE	Stack ID	Description	Control Efficiency
C8	788-08	S10	One (1) 40K CFM Packed-bed Scrubber	72%[1] - VOC 75% - PM
CE4	69-07	S8	One (1) Nebraska 90 MMBtu/hr Boiler, Model NOS-2AS64 2005	96% - VOC 75% - PM
CE18	83-09	S9	One (1) 63.0 MMBtu/hr boiler. Fuels: Natural Gas, No. 2 Fuel Oil, Animal Fat (pork grease) Manufacturer: York Shipley Model: 5112L-2D-1500X-S300	96% - VOC 75% - PM
C13	33252-11	S8, S9	PM knockout scrubber	75% - PM

[1] This efficiency is from the 2009 stack test and will be used until re-testing is completed.

U2 Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **$PM/PM_{10}/PM_{2.5}$**

i. For the blood dryer (E8) and three process cyclone separators (E8a, E8b, and E8c), the owner or operator shall not allow or cause the PM emissions to exceed 3.07 lb/hr from each emission point. These emission points shall be controlled at all times that the process is in operation. (Regulation 7.08, section 3.1.2) (See U2 Comments 1 and 7)

ii. The owner or operator shall not allow or cause the PM emissions to exceed 26.41 lb/hr from the continuous cooker (E14). (Regulation 7.08, section 3.1.2) (See U2 Comment 2)

iii. The owner or operator shall not allow or cause the PM emissions to exceed 5.51 lb/hr from the hair hydrolyzer (E11). (Regulation 7.08, section 3.1.2) (See U2 Comment 3)

iv. The owner or operator shall not allow or cause the PM emissions to exceed 10.33 lb/hr from the pet food grinder and surge hopper (E13). (Regulation 7.08, section 3.1.2) (See U2 Comment 4)

v. The owner or operator shall not allow or cause the PM emissions to exceed 12.52 lb/hr from the hammer mill (E12). (Regulation 7.08, section 3.1.2) (See U2 Comment 5)

b. **Opacity**

For Emission Points E8, E8a, E8b, E8c, E11, E12, E13, and E14, the owner or operator shall not allow the opacity to equal or exceed 20%. (Regulation 7.08, section 3.1.1)

c. **Odor**

i. No person shall emit or cause to be emitted into the ambient air any substance that creates an objectionable odor beyond the person's property line. An odor will be deemed objectionable when documented investigation by the District includes, as a minimum: observations on the odor's nature, intensity, duration, and location, and evidence that the odor causes injury, detriment, nuisance, or annoyance to persons or to the public. (Regulation 1.13)

ii. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the District which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (Regulation 2.17, section 5.1)

iii. The owner or operator shall reduce or eliminate process drains, blow down, and water from flowing directly to the floor. These shall be connected to enclosed drains where possible. (Regulation 2.17, section 5.1)(Company Requested on July 11, 2008)

iv. The owner or operator shall check the roof at least once per week and keep it clean of any materials that would cause odors. (Regulation 2.17, section 5.1)(Company Requested on July 11, 2008)

v. The owner or operator shall have fresh air wall louvers in the south and west walls of the rendering area. (Regulation 2.17, section 5.1)(Company Requested on July 11, 2008)

vi. The owner or operator shall reduce wall openings around the dead hog loading conveyor located on the southwest wall and keep outside doorways closed to maintain sufficient negative pressure inside the building. (Regulation 2.17, section 5.1)(Company Requested on July 11, 2008)

vii. The owner or operator shall keep all doors closed when entry way is not in use. (Regulation 2.17, section 5.1)(Company Requested on July 11, 2008)

d. **Hydrogen Sulfide (H_2S)**

For the Blood Dryer (E8), the owner or operator shall not allow or cause the emissions of H_2S to exceed 10 grains/100 dscf at 0% excess oxygen. (Regulation 7.09, section 3.1) (See U2 Comment 6)

e. **NO_X**

For the Blood Dryer (E8), the owner or operator shall not cause or allow the NOx emissions to exceed 300 ppm by volume. (Regulation 7.08, section 4.1) (See U2 Comments 8 and 9)

f. **VOC**

i. For Emission Points E11 and E14, the owner or operator shall utilize the control devices (Condensers in combination with either Boiler #4 or #5 as the primary controls or the condensers with the 40K scrubber as the backup to the boilers) at all times. These controls have been determined to be VOC BACT. (Regulation 7.25, section 3.1) (See U2 Comment 11)

ii. The owner or operator shall not allow or cause the plant-wide VOC emissions from equipment subject to Regulation 7.25 to exceed 15.0 tons per 12 consecutive month period for the following emission points combined: E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14, and Emission Unit 3 wastewater treatment (E15). (Regulation 7.25, section 3.1) (BACT) (See U2 Comment 11)

g. **TAC**

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. (Regulations 5.00 and 5.21)

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

The owner or operator shall maintain, at the facility, the required records for a minimum of five (5) years and make the records readily available to the District upon request.

a. **$PM/PM_{10}/PM_{2.5}$**

i. For the Blood Dryer (E8) and three process cyclone separators (E8a, E8b, and E8c),

1) The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating.

2) If there is any time that the control device is bypassed or not in operation when the process is operating, then the owner or operator shall keep a record of the following for each bypass event:

(a) Date;
(b) Start time and stop time;
(c) Identification of the control device and process equipment;
(d) PM emissions for each hour during the bypass in lb/hr;
(e) Summary of the cause or reason for each bypass event;
(f) Corrective action taken to minimize the extent or duration of the bypass event; and
(g) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

b. **Opacity**

i. The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and

a negative declaration shall be entered in the record.

c. **Odor**

i. For the condensers, the owner or operator shall monitor and record the following requirements:

1) Daily record the start and stop times for operation of the Dupps cooker and Hair Hydrolyzer each calendar day. If the Dupps cooker and Hair Hydrolyzer are not operated in a calendar day then a statement shall be made in the record that the equipment did not run.

2) The water outlet temperature at least once every 2 hours to assure the temperature is 160°F or less during periods of process operation;

3) The exhaust gas outlet temperature at least once every 2 hours to assure the temperature is 140°F or less during periods of process operation;

4) The date and time when the condensers are cleaned on both the vapor and water side of the tubes on no less than a semi-annual basis; and

5) The date and time the owner or operator performs visual checks for system leaks no less than at least once during each calendar month and description of what repairs (if any) are necessary.

ii. For the 75,000 cfm scrubber, the owner or operator shall monitor and record the following during operation and at least once each operating day:

1) The daily temperature of the scrubbing solution to assure the temperature is maintained at 120°F or less during periods of process operation;

2) The Oxidation Reduction Potential (ORP) at least once every 8 hours to assure an ORP range of 400 mV to 950 mV during periods of process operation;

3) The pH of the scrubbing solution at least once every 8 hours to assure a pH range of 7.2 to 9.5. The owner or operator shall check the pH at a location where the water exits the packed bed scrubber during periods of process operation;

4) The water flow rate at least once every 8 hours to assure a flow rate of 600 gal/min or greater during periods of process operation;

5) The exhaust gas outlet temperature at least once every 4 hours to assure the temperature is maintained at 110°F or less during periods of process operation;

6) The chlorine concentration at least once every 8 hours to assure the residual free chlorine concentration is 120 ppm or less during periods of process operation;

7) The date and time that the owner or operator inspects and cleans, as necessary, the scrubber and associated duct work no less than on a quarterly basis. Acid shall be used to remove scale buildup and caustic shall be used to remove grease buildup. After each cleaning, a visual inspection of the spray pattern of the nozzles shall be checked for proper spray pattern. A record shall be made of the day the cleaning was performed and the results; and

8) The date and time for the following quarterly visual inspections to assure proper operation and to minimize odorous emissions:

Quarterly Inspections

- Inspect system for leaks
- Check pump and fan motor for unusual vibration, noise, or heat
- Check chemical metering pumps and probes for proper operation
- Scrubbing solution odor
- Inspect spray nozzle distribution pattern and signs of plugging from buildup of grease, solids, or scale
- Check fan housing drain
- Check condition of fan bearings, belts, and seals
- Inspect fan impeller and blades for solids buildup or erosion
- Check inside of ductwork systems for plugging from grease, solids, or scale
- Inspect packing for breakage and solids buildup. Replace packing media, if necessary.
- Inspect mist eliminator for solids buildup. Replace mist eliminator, if necessary.
- Inspect sump for solids buildup
- Inspect internal components for corrosion or breakage
- Inspect structural supports for deterioration and/or damage

If any of the above conditions exist the appropriate measures and corrective action will be implemented within eight (8) hours (i.e., replace or repair any defective equipment components or conduct cleaning, as necessary). A record shall be made of any corrective actions taken or if no corrective actions were required.

iii. For the 40,000 cfm packed-bed wet scrubber, the owner or operator shall monitor and record the following during operation and at least once each operating day:

1) The temperature of the scrubbing solution at least once each operating day to assure the temperature is maintained at 120°F or less during periods of process operation;

2) The oxidation reduction potential (ORP) at least once every 8 hours to assure an ORP of 400 mV to 950 mV during periods of process operation;

3) The pH of the scrubbing solution at least once every 8 hours to assure a pH of 7.2 to 9.5. The owner or operator shall check the pH at a location where the water exits the packed-bed scrubber during periods of process operation;

4) The water flow rate at least once every 8 hours to assure the flow rate is 325 gal/min or greater during periods of process operation;

5) The exhaust gas outlet temperature at least once every 4 hours to assure the exhaust gas temperature is 120°F or less during periods of process operation;

6) The chlorine concentration at least once every 8 hours to assure the maximum residual free chlorine concentration is 120 ppm or less during periods of process operation;

7) The date and time that the owner or operator inspects and cleans, as necessary, the scrubber and associated duct work no less than on a quarterly basis. Acid shall be used to remove scale buildup and caustic shall be used to remove grease buildup. After each cleaning, a visual inspection of the spray pattern of the nozzles shall be checked for proper spray pattern; and

8) The date and time for visual inspections of the following items to assure proper operation and to minimize odorous emissions:

Quarterly Inspections

- Inspect system for leaks
- Check pump and fan motor for unusual vibration, noise, or heat
- Check chemical metering pumps and probes for proper operation
- Scrubbing solution odor
- Inspect spray nozzle distribution pattern and signs of plugging from buildup of grease, solids, or scale
- Check fan housing drain
- Check condition of fan bearings, belts, and seals
- Inspect fan impeller and blades for solids buildup or erosion
- Check inside of ductwork systems for plugging from grease, solids, or scale
- Inspect packing for breakage and solids buildup. Replace packing media, if necessary.
- Inspect mist eliminator for solids buildup. Replace mist eliminator, if necessary.
- Inspect sump for solids buildup
- Inspect internal components for corrosion or breakage
- Inspect structural supports for deterioration and/or damage

If any of the above conditions exist the appropriate measures and corrective action will be implemented within eight (8) hours (i.e., replace or repair any defective equipment components or conduct cleaning, as necessary).

iv. For the blood drying system, the owner or operator comply with the following monitoring requirements:

1) The owner or operator shall operate and maintain the temperature of the dryer exhaust at 219°F or less. The temperature shall be monitored and

recorded at least once every 2 hours during operation and at least once each operating day.

2) The owner or operator shall operate and maintain a chart recorder or equivalent continuous temperature recording device for the operating temperature of the dryer.

3) The owner or operator shall perform weekly inspections and record the results of the blood drying system process equipment to assure proper operation which includes inspecting the ducts and connections to the control device, and inspecting the integrity of the containment and seals to prevent vapors from escaping from the blood dryer.

4) The owner or operator shall inspect the blood drying system equipment on a daily basis and record the results to assure odor-producing materials are stored, transported, and handled in a manner that accumulation of these materials resulting from spillage is prevented.

v. For the continuous cooker, the owner or operator shall perform and record the results of the following during operation and at least once each operating day:

1) The owner or operator shall monitor the temperature of the continuous cooker at least once every 2 hours to assure the operating temperature does not exceed 319°F; and

2) The owner or operator shall perform visual inspections of the continuous cooker at least once every 8 hours to assure proper operation which consists of checking the ductwork and connections to the control device, checking the integrity of the containment and seals to prevent vapors from escaping, and inspecting the cooker to assure that all odor producing materials are stored, transported, and handled in a manner to prevent accumulation as a result of spillage.

vi. The owner or operator shall maintain the following spare parts onsite: Two (2) each of recycle water pump, chemical pump, and probes.

vii. For the venturi scrubber, the owner or operator shall monitor and record the results of the following performance indicators during operation and at least once each operating day:

1) Daily monitoring and record the temperature of the scrubbing solution to assure the temperature is maintained at 120°F or less;

2) Monitor and record the pressure drop at least once every 8 hours to assure a pressure drop of 4.0 to 9.0 inches w.c.;

3) Visual inspections of the venturi scrubber for the following items to assure proper operation to minimize odorous emissions shall be performed and the date and time recorded:

Monthly Inspections

- Inspect system for leaks and repair as necessary

- Check the ductwork system for buildup of grease or solids and clean as necessary;

4) The water flow rate at least once every 8 hours to assure the minimum flow rate is 11.5 gal/min or greater during periods of process operation;

5) The owner or operator shall continue to monitor and record the water flow rate (gpm) once every 8 operating hours and at least once each time the device is started up.

d. **Hydrogen Sulfide (H_2S)**

There are no compliance monitoring or record keeping requirements for H_2S. (See U2 Comment 6)

e. **NOx**

There are no compliance monitoring or recordkeeping requirements for NO_X. (See U2 Comments 8 and 9)

f. **VOC**

i. Daily record of the hours of operation of the Dupps cooker and Hair Hydrolyzer each calendar day shall be made. If the Dupps cooker and Hair Hydrolyzer are not operated in a calendar day then a statement shall be made in the record that the equipment did not run.

ii. The owner or operator shall daily record the number of hours that process equipment was in operation during each of the following circumstances:

1) While emissions from E11 were captured properly and sent from the condenser to either Boiler #4 or #5;

2) While emissions from E11 were sent from the condenser to the 40K Scrubber instead of the Boilers;

3) While emissions from E11 were controlled by the condenser but bypassing or for any reason not being properly controlled by either the Boilers or the 40K Scrubber;

4) While emissions from E11 were bypassing or for any reason not being properly controlled by any condenser, Boiler, 40K Scrubber, or 75K Room Air Scrubber;

5) While emissions from E11 were bypassing or for any reason not being properly controlled by the condenser while being sent to either Boiler #4 or #5;

6) While emission from E11 were bypassing or for any reason not being properly controlled by the condenser while being sent to the 40K Scrubber;

7) While emissions from E11 were not captured or properly controlled by the condenser and released but are instead collected and controlled by only the 75K Room Air Scrubber;

8) While emissions from E11 were captured and controlled by the condenser then released but collected and controlled by the 75K Room Air Scrubber;

9) While emissions from E14 were captured properly and sent from the condenser to either Boiler #4 or #5;

10) While emissions from E14 were sent from the condenser to the 40K Scrubber instead of the Boilers;

11) While emissions from E14 were controlled by the condenser but bypassing or for any reason not being properly controlled by either the Boilers or the 40K Scrubber;

12) While emissions from E14 were bypassing or for any reason not being properly controlled by any condenser, Boiler, 40K Scrubber, or 75K Room Air Scrubber;

13) While emissions from E14 were bypassing or for any reason not being properly controlled by the condenser while being sent to either Boiler #4 or #5;

14) While emission from E14 were bypassing or for any reason not being properly controlled by the condenser while being sent to the 40K Scrubber;

15) While emissions from E14 were not captured or properly controlled by the condenser and released but are instead collected and controlled by only the 75K Room Air Scrubber;

16) While emissions from E14 were captured and controlled by the condenser then released but collected and controlled by the 75K Room Air Scrubber;

17) While emissions from E5, E6, E7, E8, E8a, E8b, E8c, E12, E13a, and E13b were not captured or were not controlled properly by the 40K Scrubber;

18) While emissions from E5, E6, E7, E8, E8a, E8b, E8c, E12, E13a, and E13b were captured and controlled by the 40K Scrubber;

19) While emissions from E5, E6, E7, E8, E8a, E8b, E8c, E12, E13a, and E13b were not captured by the 40K Scrubber but are captured and controlled by the 75K Scrubber:

20) While fugitive emissions from E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, and E14 were being captured and controlled by the 75K Scrubber;

21) While fugitive emissions from E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, and E14 were not being captured or properly controlled by the 75K Scrubber.

iii. The owner or operator shall calculate the monthly and 12 consecutive month VOC emissions for the following emission points combined: E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14, and Emission Unit 3 wastewater treatment (E15) in order to demonstrate compliance with 15.0 tons per 12 consecutive month period, using the following equations, unless there is another method approved in writing by the District.

To calculate pounds of VOC emissions from emission points E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14, and Emission Unit 3 wastewater treatment per month:

When the Primary Controls (Condensers to Boilers, not the 40K Scrubber) were used for E11 (Hair Hydrolyser) and/or E14 (Dupps Cooker):

(Controlled Emission Rate from stack test (lb/hr))*(hours E11 controlled by; Condenser and Boiler during a given month)

Plus

(Controlled Emission Rate from the stack test (lb/hr))*(hours E14 controlled by; Condenser and Boiler during a given month)

Plus

(Controlled Emission Rate from the stack test (lb/hr))*(hours E11 controlled by just a Boiler during a given month)

Plus

(Controlled Emission Rate from the stack test (lb/hr))*(hours E14 controlled by just a Boiler during a given month)

Plus

For the 40K Scrubber concerning E11 (Hair Hydrolyser) and/or E14 (Dupps Cooker) in place of the boilers regardless of emissions from equipment (E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, and E14):

(Controlled Emission Rate from the stack test (lb/hr))*(hours E11 controlled by both; Condenser and 40K Scubber during a given month)

Plus

(Controlled Emission Rate from the stack test (lb/hr))*(hours E14 controlled by both; Condenser and 40K Scubber during a given month)

Plus

(Controlled Emission Rate from the stack test (lb/hr))*(hours E11 controlled by just the 40K Scrubber during a given month)

Plus

(Controlled Emission Rate from the stack test (lb/hr))*(hours E14 controlled by just the 40K Scrubber during a given month)

Plus

For periods when E11 (Hair Hydrolyser) and/or E14 (Dupps Cooker) are uncontrolled by either the Boiler or any Scrubber:

(Uncontrolled Emission Rate (lb/hr))*(hours E11captured but uncontrolled by any; Condenser, Boiler, or Scrubber during a given month)

Plus

(Uncontrolled Emission Rate (lb/hr))*(hours E14 captured but uncontrolled by any; Condenser, Boiler, or Scrubber during a given month)

Plus

(Uncontrolled Emission Rate (lb/hr))*(hours E11 controlled by only; Condenser and nothing else during a given month)

Plus

(Emission Rate (lb/hr))*(hours E14 controlled by only; Condenser and nothing else during a given month)

Plus

For the 40K Scrubber concerning only equipment (E5, E6, E7, E8, E8a, E8b, E8c, E12, E13a, and E13b), regardless of whether or not it is being used to control E11 (Hair Hydrolyser) and/or E14 (Dupps Cooker):

(Uncontrolled Emission Rate for the 40K Scrubber (lb/hr))*(hours E5, E6, E7, E8, E8a, E8b, E8c, E12, E13a, and E13b captured but uncontrolled during a given month)

Plus

(Emission Rate for the 40K Scrubber (lb/hr))*(hours E5, E6, E7, E8, E8a, E8b, E8c, E12, E13a, and E13b controlled during a given month)

Plus

For the 75K Scrubber (Fugitive emissions from E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14):

(Uncontrolled Emission Rate for 75K Scrubber (6.492 lb/hr))*(hours captured but uncontrolled during a given month)

Plus

(Emission Rate for 75K Scrubber (1.156 lb/hr))*(hours controlled during a given month)

Plus

For the 75K Scrubber (Uncontrolled emissions from E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14 captured as room air):

(Emission Rate for 75K Scrubber (lb/hr))*(1-0.822)*(hours E11 not captured by condenser during a given month but captured and controlled by the 75K Scrubber)

Plus

(Emission Rate for 75K Scrubber (lb/hr))*(1-0.822)*(hours E14 not captured by condenser during a given month but captured and controlled by the 75K Scrubber)

Plus

(Emission Rate for 75K Scrubber (lb/hr))*(1-0.822)*(hours E11 controlled by condenser during a given month then released but captured and controlled by the 75K Scrubber)

Plus

(Emission Rate for 75K Scrubber (lb/hr))*(1-0.822)*(hours E14 controlled by condenser during a given month then released but captured and controlled by the 75K Scrubber)

Plus

(Emission Rate for 75K Scrubber (lb/hr))*(1-0.822)*(hours E5, E6, E7, E8, E8a, E8b, E8c, E12, E13a, and E13b not captured by 40K Scrubber during a given month but captured and controlled by the 75K Scrubber)

Plus

For the 20K Scrubber (Wastewater):

(Inlet Emission Rate for 20K Scrubber (0.994 lb/hr))*(hours uncontrolled during a given month)

Plus

(Inlet Emission Rate for 20K Scrubber (0.278 lb/hr))*(hours controlled during a given month)

Plus

If there were any hours during the month where any of the controls were not operating properly, then the owner or operator shall calculate the monthly and 12 consecutive month plant-wide VOC emissions to demonstrate compliance with the 22.0 tons per 12 consecutive month period. The following equation shall be used to calculate monthly VOC emissions.

Plant-wide:

VOC Emissions = (Pounds of VOC from emission points E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14, Emission Unit U3 wastewater treatment (E15), and hot melt gluing operation(E17) /month) + (Pounds of VOC emissions from combustion/month)

g. **TAC**

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases.

S3. **Reporting (Regulation 2.17, section 5.2)**

The owner or operator shall include the following information in the annual compliance report.

a. **PM/PM_{10}/$PM_{2.5}$**

i. The owner or operator shall report the following information regarding PM emissions:

1) Emission Unit number and Emission Point number for each exceedance;

2) The beginning and ending date of the reporting period;

3) The monthly and 12 consecutive month plant-wide PM/PM10 emissions for each month in the reporting period; and

4) Description of any corrective action taken for each exceedance

ii. For the Blood Dryer (E8) and three process cyclone separators (E8a, E8b and E8c), the owner or operator shall report the following information regarding PM By-Pass Activity in the semi-annual reports.

1) Number of times the PM vent stream by-passes the control device and is vented to the atmosphere;

2) Duration of each by-pass to the atmosphere; and

3) Calculated quantity of tons of PM emitted for each by-pass.

4) A negative declaration if no by-passes occurred.

b. **Opacity**

The owner or operator shall report the following information regarding Opacity emissions:

i. Emission Unit number and Emission Point number for each exceedance;

ii. The beginning and ending date of the reporting period;

iii. Any deviation from the requirement to perform the required monthly VE surveys or Method 9 tests;

iv. Any deviation from the requirement to record the results of each monthly VE survey and Method 9 test performed;

v. The number of surveys where visible emissions were observed;

vi. The date, time, and results of each Method 9 that exceeded the opacity standard; and

vii. Description of any corrective action taken.

c. **Odor**

The owner or operator shall report the following information regarding Odor emissions:

i. Emission Unit number and Emission Point number for each exceedance;

ii. The beginning and ending date of the reporting period;

iii. Identification of all periods of failure to comply with a monitoring requirement specified in this permit. The report shall include identification of the monitoring requirement, the date of failure to comply with a monitoring requirement, summary information on the reason or cause for not meeting the monitoring requirement, corrective action taken, and measures implemented to prevent reoccurrence of the situation that resulted in failure to comply with a monitoring requirement. If there are no periods of failure to comply with a monitoring requirement during a reporting period, the owner or operator shall submit a negative declaration;

iv. Identification of all periods of failure to maintain records of the results of any compliance monitoring requirement specified in this permit. If there are no periods of failure to maintain the required records during a reporting period, the owner or operator shall submit a negative declaration;

v. Identification of all periods of excursions during the reporting period. Excursion is defined as any departure from an established control device performance

indicator range specified in this permit;

vi. Identification of all periods of bypassing a control device while the associated process equipment is in operation during a reporting period. The report shall include the date, duration (including start and stop time) of each bypass event, identification of the control device and process equipment, summary information on the cause or reason for each bypass event, corrective action taken to minimize the extent and duration of each bypass event, and measures implemented to prevent reoccurrence of the situation that resulted in bypassing a control device. If there are no periods of bypassing a control device during a reporting period, the owner or operator shall submit a negative declaration for the reporting period.

d. **Hydrogen Sulfide (H_2S)**

There are no compliance reporting requirements for H_2S.

e. **NOx**

There are no compliance reporting requirements for NOx. (See U2 Comments 8 and 9)

f. **VOC**

The owner or operator shall report the following information regarding VOC emissions:

i. If there are any time during the reporting period that required VOC emissions to be calculated, otherwise report that no deviations occurred for the control devices;

ii. Emission Unit number and Emission Point number for each exceedance;

iii. The beginning and ending date of the reporting period;

iv. The monthly and 12 consecutive month VOC emissions from emission points E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14, and Emission Unit 3 wastewater treatment (E15) for each month in the reporting period;

v. The monthly and 12 consecutive month plant-wide VOC emissions for each month in the reporting period; and

vi. Description of any corrective action taken for each exceedance.

g. **TAC**

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most

recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 – 4.24)

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material.

S4. **Testing (Regulation 2.17, section 5.2)**

a. **$PM/PM_{10}/PM_{2.5}$**

There are no testing requirements for $PM/PM_{10}/PM_{2.5}$.

b. **Opacity**

There are no testing requirements for Opacity.

c. **Odor**

There are no testing requirements for Odor.

d. **Hydrogen Sulfide (H_2S)**

There are no testing requirements for Odor H_2S.

e. **NO_X**

There are no testing requirements for NO_X.

f. **VOC**

i. The owner or operator shall perform EPA Reference Method 25A performance tests within the approved District timeframe as proposed by the company in Stack Test Plan[2] dated January 25, 2016, on the following scenarios:

1) The inlet of the Venturi Scrubber with all possible emission points venting to it except E11 and E14; and

2) The outlet of the 40K Scrubber with all possible emission points venting to it except E11 and E14.

ii. The owner or operator shall propose in the test protocol parameters to measure throughput rate of the blood dryer.

iii. The test shall be performed at 90% or higher of maximum capacity (1,550 lb/hr output), or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the

[2] The District approved the Stack Test Plan on February 5, 2016.

limit. In lieu of the test the owner or operator may submit a signature guarantee from the control device manufacture stating the control device efficiency.

iv. The owner or operator shall perform capture efficiency tests for VOC using EPA guidelines within the approved District timeframe as proposed by the company in Stack Test Plan dated January 25, 2016, on the capture devices used for the Room Air Scrubbers (20K and 75K) as well as the Primary Control Systems (40 K scrubber). In lieu of performing a capture efficiency test, the owner or operator may submit a reasonable estimate of capture efficiency with thorough justification subject to approval by the District.

v. The owner or operator shall submit written compliance test plans (protocols) for the control efficiency and capture efficiency. They shall include the EPA test methods that will be used for VOC compliance testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators (e.g. pressure drop, minimum combustion chamber temperature) that will be monitored during the performance test. The compliance test plans shall be furnished to the District at least 30 days prior to the actual date of the performance test.[3]

vi. The owner or operator shall be responsible for obtaining and analyzing audit samples, if audit samples are available, when the EPA Reference Method is used to analyze samples to demonstrate compliance with the source's emission regulation. The audit samples shall be available for verification by the District during the onsite testing.

vii. The owner or operator shall provide the District at least 10 days prior notice of any performance test to afford the District the opportunity to have an observer present.

viii. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 days following the actual date of completion of the performance test.

g. **TAC**

There are no testing requirements for TAC.

U2 Comments

1. Based on AP-42 emission factors (1.20 lb PM/ton product), the potential controlled PM emissions from the blood dryer are below the applicable PM emission standards; therefore, the source is required to monitor the performance of the control devices.

(2500 lb/hr)(1.2 lb PM/2000 lb)(8760 hr/yr)(ton/2000 lb) = 6.57 tpy controlled
(2500 lb/hr)(1.2 lb PM/2000 lb) = 1.5 lb/hr controlled

[3] The following parameters shall be monitored during the stack test for the 40K Scrubber: (1) scrubbing solution temperature <120 °F, (2) The oxidation reduction potential (ORP) range 400 mV to 950 mV, (3) PH of scrubbing solution range 7.2 to 9.5, (4) water flow rate > 325 gal/min, (5) exhaust gas temperature <120 °F, and (6) chlorine < 120 ppm.

(1.5 lb/hr)/(1 - 0.75) = 6 lb/hr uncontrolled
75% Control Efficiency: 1.20 / 0.25 = 4.8 lb PM/ton uncontrolled
(2500 lb/hr)(4.80 lbPM/2000 lb)(8760 hr/yr)(ton/2000 lb) = 26.28 tpy uncontrolled

2. For the Dupps continuous cooker, the potential uncontrolled PM emissions are below the lb/hr standard. An emission rate of 9.72 lb PM/hr product shall be used to determine the uncontrolled PM emissions based on stack test dated 11/20/2009. An emission rate of 0.61 lb/hr shall be used to determine the controlled PM emissions based on a control efficiency of 75% each for the PM knock-out scrubber (C13) and the boiler (CE4 or CE18).

3. For the hair hydrolyzer, the potential uncontrolled PM emissions are below the lb/hr standard. An emission rate of 0.011 lb PM/hr shall be used to determine the uncontrolled PM emissions based on the September 2013 stack test data and the 2015 Stack Test Plan. An emission rate of 0.00069 lb PM/hr shall be used to determine the controlled PM emissions based on a control efficiency of 75% each for the PM knock-out scrubber (C13) and the boiler (CE4 or CE18).

4. For the pet food grinder and surge hopper, the potential uncontrolled PM emissions are below the lb/hr standard. An emission factor of 0.01 lb PM/ton shall be used to determine the controlled PM emissions based on a maximum throughput of 11,000 lb/hr, 0.01% PM loss, and a control efficiency of 95% for the 75K cfm packed-bed scrubber.

(11,000 lb/hr)(0.0001)(8760 hr/yr)(ton/2000 lb) = 4.82 tpy uncontrolled
(4.82 tpy)(1 - 0.95) = 0.241 tpy controlled
(0.055 lb/hr)(1 hr/5.5 tons) = 0.01 lb PM/ton processed controlled

5. For the hammer mill, the potential uncontrolled PM emissions are below the lb/hr standard. An emission factor of 0.01 lb PM/ton shall be used to determine the controlled PM emissions based on a maximum throughput of 15,000 lb/hr, 0.01% PM loss, and a control efficiency of 95% for the 75K cfm packed-bed scrubber.

(15,000 lb/hr)(0.0001)(8760 hr/yr)(ton/2000 lb) = 6.57 tpy uncontrolled
(6.57 tpy)(1 - 0.95) = 0.328 tpy controlled
(0.075 lb/hr)(1 hr/7.5 tons) = 0.01 lb PM/ton processed controlled

6. Based on AP-42, section 9.5.3-2, the emission factor for hydrogen sulfide is 0.08 lb/ton processed. Per Regulation 7.09, section 3.1, the emission standards for H_2S is 10 grains/100 dscf. The volumetric air flow rate for the blood dryer is 1600 scfm.

Allowable H_2S Emission Rate: (1600 ft3/min)(60 min/hr)(10 grain/100 ft3)(1 lb/7000 gr) = 1.37 lb/hr
(0.08 lb/ton)(2500 lb/hr)(ton/2000 lb) = 0.10 lb/hr

7. Based on AP-42 emission factor of 1.20 lb PM/ton product for emissions from a blood dryer, the potential uncontrolled PM emissions from each of the process cyclone separators is (2500 lb/hr)(1.2 lbPM/ton) (ton/2000 lb) = 1.5 lb/hr controlled and assuming 75% control efficiency (1.5 lb/hr)/(1 - 0.75) = 6 lb/hr. Therefore, the potential controlled PM emissions are below the standard.

8. The Hair Hydrolyzer (E11) and the Dupps Continuous Cooker (E14) both only use steam from the boilers, therefore the NOx standard in Regulation 7.08 does not apply.

9. For the Blood Dryer (E8), based on an air flow of 3333 acfm and a density of air of 0.075 lb/ft3 @ 70°F and 14.7 psia that would equal 15000 lbair/hr. Using the burner size of 3.5 MMBtu/hr

divided by the heat content of natural gas of 1020 MMBtu/mmcf multiplied by the AP-42 emission factor for natural gas of 100 lbNOx/mmcf, this would equal 0.343 lbNOx/hr. (0.343 lbNOx/hr)/(15000 lbair/hr) would equal 22.87 ppm, which is below the standard of 300 ppm. Since the emission standard cannot be exceeded there are no monitoring, recordkeeping, or reporting requirements for this standard.

10. The potential uncontrolled PM emissions for emission points Hair Hydrolyzer (E11) and Dupps Cooker (E14) are less than the standards in Regulation 7.08. Therefore, there are no monitoring, recordkeeping, and reporting requirements for the lb/hr PM standards.

11. The condensers in combination with either Boiler #4 or #5 as the primary control or the 40K scrubber as the backup, along with the 20k scrubber on the wastewater treatment operating has been determined to be VOC BACT. The stack test results will be used to determine the VOC emission rates, that will be utilized in the calculation demonstrate compliance with 15.0 tons and 22.0 tons per 12 consecutive month period.

12. The capture efficiency of the Primary Control System capture devices may be found by calculating the quotient of the inlet to the two condensers (Hair Hydrolyzer E11 and Dupps Cooker E14) plus the inlet to the 40K scrubber while it is not controlling E11 and E14, divided by the inlet to the two condensers (Hair Hydrolyzer E11 and Dupps Cooker E14) plus the inlet to the 40K scrubber while not controlling E11 and E14 plus the inlet to the 75K Scrubber as determined during the stack test conducted November 2009.

13. The capture efficiency of the Room Air Scrubbers shall be tested or estimated with thorough justification subject to approval by the District. A capture efficiency protocol for gasses is discussed in District Regulation 1.05 section 3.3.3.1.

14. Emissions from the rendering process include TAC emissions of Ammonia for which the company PTE is De Minimins, and Quinoline which is Category 3 and will apply to future construction or modification of the rendering process equipment.

15. Per an EPA rule change ("Restructuring of the Stationary Source Audit Program." Federal Register 75:176 (September 13, 2010) pp 55636-55657), sources became responsible for obtaining the audit samples directly from accredited audit sample suppliers, not the regulatory agencies.

16. For the Hair Hydrolyzer, an emission rate of 0.61 lb VOC/hr shall be used to determine the uncontrolled VOC emissions based on the September 2013 stack test data and the 2015 Stack Test Plan. A control efficiency of 59% shall be used for the hair hydrolyzer condenser based on the September 2013 stack test data and the 2015 Stack Test Plan.

17. For the Dupps continuous cooker, an emission rate of 16.4 lb VOC/hr shall be used to determine the uncontrolled VOC emissions based on the September 2013 stack test data and the 2015 Stack Test Plan. A control efficiency of 97.9% shall be used for the cooker condenser based on the September 2013 stack test data and the 2015 Stack Test Plan.

18. For equipment controlled by Boilers CE4 and CE18, a control efficiency of 96% shall be used to calculate controlled VOC emissions based on the September 2013 stack test data and the 2015 Stack Test Plan.

Emission Unit U3

U3 Unit Description: Wastewater Treatment System

U3 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permit	All
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1 through 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.13	Control of Objectionable Odors in the Ambient Air	1 through 3
5.00	Definitions	All
5.01	General Provisions	1 through 4
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U3 Equipment

Emission Point	P/PE	Description	Applicable Regulation	Control ID
E15	14-01	One (1) Wastewater/Grease Treatment System	1.13, 5.00, 5.01 5.20, 5.21, 5.22, 5.23, 7.25	C5

U3 Control Devices

ID	P/PE	Stack ID	Description	Control Efficiency
C5	78-92	S10	One (1) 20K Packed-bed Scrubber	72%

U3 Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **Odor**

i. No person shall emit or cause to be emitted into the ambient air any substance that creates an objectionable odor beyond the person's property line. An odor will be deemed objectionable when documented investigation by the District includes, as a minimum: observations on the odor's nature, intensity, duration, and location, and evidence that the odor causes injury, detriment, nuisance, or annoyance to persons or to the public. (Regulation 1.13)

ii. At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the District which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (Regulation 2.17, section 5.1)

b. **VOC**

The owner or operator shall not allow or cause the plant-wide VOC emissions from equipment subject to Regulation 7.25 to exceed 15.0 tons per 12 consecutive month period for the following emission points combined: E5, E6, E7, E8, E8a, E8b, E8c, E11, E12, E13a, E13b, E14, and Emission Unit 3 wastewater treatment (E15). (Regulation 7.25, section 3.1) (BACT) (See U3 Comment 2)

c. **TAC**

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. (Regulations 5.00 and 5.21) (See U3 Comment 1)

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

The owner or operator shall maintain, at the facility, the required records for a minimum of five (5) years and make the records readily available to the District upon request.

a. **Odor**

i. The owner or operator shall perform the following monitoring at least once every 8 hours and record the results including the date of the inspections and the name of the person conducting the survey:

1) Visually inspect the system to assure all equipment is functioning properly;

2) Visually inspect all connections to the control device for signs of air leakage, damage, corrosion, or other equipment defects;

3) Visually inspect the Flow Equalization Basin/Tank to assure integrity of the containment system;

4) Visually inspect the influent screens for blockage and the level control of the Flow Equalization Basin (tank); and

5) Inspect the wastewater system to assure that all odor producing materials are stored, transported, and handled in a manner to prevent accumulation as a result of spillage.

ii. For the 20,000 CFM packed-bed scrubber, the owner or operator shall have put in place a flex connector to improve volume flow through the scrubber.

iii. For the 20,000 CFM packed-bed wet scrubber, the owner or operator shall monitor and record the following requirements for each:

1) The temperature of the scrubbing solution at least once each operating day to assure the temperature is maintained at 100°F or less during periods of process operation;

2) The oxidation reduction potential (ORP) at least once every 8 hours to assure an ORP of 400 mV to 950 mV during periods of process operation;

3) The pH of the scrubbing solution at least once every 8 hours to assure a pH of 7.2 to 9.5. The owner or operator shall check the pH at a location where the water exits the packed-bed scrubber during periods of process operation;

4) The water flow rate at least once every 8 hours to verify the minimum water flow rate is 288 gallons/minute to assure proper operation;

5) The chlorine concentration at least once every 8 hours to assure the maximum residual free chlorine concentration is 120 ppm or less during periods of process operation;

6) The date and time that the owner or operator inspects and cleans, as necessary, the scrubber and associated duct work no less than on a quarterly basis. Acid shall be used to remove scale buildup and caustic shall be used to remove grease buildup. After each cleaning, a visual inspection of the spray pattern of the nozzles shall be checked for proper spray pattern; and

7) The date and time for visual inspections of the following items to assure proper operation and to minimize odorous emissions:

Quarterly Inspections

- Inspect system for leaks
- Check pump and fan motor for unusual vibration, noise, or heat

- Check chemical metering pumps and probes for proper operation
- Scrubbing solution odor
- Inspect spray nozzle distribution pattern and signs of plugging from buildup of grease, solids, or scale
- Check fan housing drain
- Check condition of fan bearings, belts, and seals
- Inspect fan impeller and blades for solids buildup or erosion
- Check inside of ductwork systems for plugging from grease, solids, or scale
- Inspect packing for breakage and solids buildup. Replace packing media, if necessary.
- Inspect mist eliminator for solids buildup. Replace mist eliminator, if necessary.
- Inspect sump for solids buildup
- Inspect internal components for corrosion or breakage
- Inspect structural supports for deterioration and/or damage

If any of the above conditions exist the appropriate measures and corrective action will be implemented within eight (8) hours (i.e., replace or repair any defective equipment components or conduct cleaning, as necessary).

b. **VOC**

i. The owner or operator shall daily record the number of hours that process equipment was in operation during each of the following circumstances:

1) While emissions from E15 were not captured or were not controlled properly by the 20K Scrubber.

2) While emissions from E15 were captured and controlled by the 20K Scrubber.

ii. See emission unit U2 monitoring and record keeping requirements for calculating emissions for emission point E15.

c. **TAC**

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases.

S3. **Reporting (Regulation 2.17, section 5.2)**

The owner or operator shall include the following information in the annual compliance report.

a. **Odor**

The owner or operator shall report the following information regarding Odor emissions:

i. Identification of all periods of failure to comply with a monitoring requirement specified in this permit. The report shall include identification of the monitoring requirement, the date of failure to comply with a monitoring requirement, summary information on the reason or cause for not meeting the monitoring requirement, corrective action taken, and measures implemented to prevent reoccurrence of the situation that resulted in failure to comply with a monitoring requirement. If there are no periods of failure to comply with a monitoring requirement during a reporting period, the owner or operator shall submit a negative declaration;

ii. Identification of all periods of failure to maintain records of the results of any compliance monitoring requirement specified in this permit. If there are no periods of failure to maintain the required records during a reporting period, the owner or operator shall submit a negative declaration;

iii. Identification of all periods of excursions during the reporting period. Excursion is defined as any departure from an established control device performance indicator range specified in this permit; and

iv. Identification of all periods of bypassing a control device while the associated process equipment is in operation during a reporting period. The report shall include the date, duration (including start and stop time) of each bypass event, identification of the control device and process equipment, summary information on the cause or reason for each bypass event, corrective action taken to minimize the extent and duration of each bypass event, and measures implemented to prevent reoccurrence of the situation that resulted in bypassing a control device. If there are no periods of bypassing a control device during a reporting period, the owner or operator shall submit a negative declaration for the reporting period.

v. For the 20,000 CFM packed-bed wet scrubber, the owner or operator shall report exceedances of the following:

1) The scrubber solution temperature;

2) ORP (mV) value;

3) pH measurement of the scrubbing solution;

4) Water flow rate (gpm) measurement; and

5) The residual free chlorine concentration (ppm).

b. **VOC**

See emission unit U2 reporting requirements for emission point E15.

c. **TAC**

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability

Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 – 4.24)

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material.

U3 Comment

1. Emissions in wastewater from the rendering process include TAC emissions of Ammonia for which the company PTE is De Minimins, and Quinoline which is Category 3 and will apply to future construction or modification of the rendering process equipment.

2. The condensers in combination with either Boiler #4 or #5 as the primary control or the 40K scrubber as the backup, along with the 20k scrubber on the wastewater treatment operating has been determined to be VOC BACT. The stack test results will be used to determine the VOC emission rates, that will be utilized in the calculation demonstrate compliance with 15.0 tons and 22.0 tons per 12 consecutive month period.

Emission Unit U4

U4 Unit Description: One (1) Hot-Melt Glue/Adhesive Machine, 1998

U4 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permit	All
7.25	Standards of Performance for New Sources Using Volatile Organic Compounds	1, 2, 3, 4, & 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	All
5.01	General Provisions	1 through 4
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U4 Equipment

Emission Point	P/PE	Description	Applicable Regulation	Control ID
E17	522-08	One (1) Forbo, Model Swift 82516, hot melt glue machine. Installed in 1998	7.25, 5.00, 5.01 5.20, 5.21, 5.22, 5.23	N/A

U4 Control Devices

There are no control devices associated with Emission Unit 4.

U4 Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **VOC**

The owner or operator shall not allow or cause the plant-wide VOC emissions to exceed 5 tons per year from affected facilities subject to District regulation 7.25 that do not have BACT. (Regulation 7.25, Section 3) (See U4 Comment 1)

b. **TAC**

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. (Regulations 5.00 and 5.21) (See U4 Comment 2)

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

The owner or operator shall maintain, at the facility, the required records for a minimum of five (5) years and make the records readily available to the District upon request.

a. **VOC**

i. The owner or operator shall monitor and maintain records of the quantity (in lbs) and type (including MSDS) of glue used during each calendar month and each consecutive 12-month period.

ii. The owner or operator shall maintain monthly records, including calculations, that show the plant-wide calendar month and consecutive 12-month VOC emissions from affected facilities subject to the plant-wide 22 tons per 12 consecutive month period, using the following equation, unless there is another method approved in writing by the District.

For the Gluing Operation:

(Pounds of adhesive used for the month)*(0.001)

b. **TAC**

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases.

S3. **Reporting (Regulation 2.17, section 5.2)**

The owner or operator shall include the following information in the annual compliance report.

a. **VOC**

i. For affected facilities that do not have BACT subject to the District regulation 7.25 less than that 5 ton per year limit, there are no reporting requirements.

ii. See the plant-wide reporting requirements.

b. **TAC**

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 – 4.24)

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material.

U4 Comments

1. The potential uncontrolled VOC emissions from the hot melt glue machine are 0.061 tpy based on a maximum adhesive usage rate of 14 lb/hr and a 0.1% VOC loss. Currently the hot melt glue machine is the only piece of equipment subject to Regulation 7.25 that is not part of a BACT (less than 5tpy limit), but any new equipment that emits VOCs will be part of this limit unless the company submits a BACT analysis.

2. The Forbo Adhesives, LLC - Swift 82516 hot melt glue is an ethylene-vinyl acetate (EVA) copolymer based glue which contains a free vinyl acetate content of 0.071%. Vinyl acetate is a listed Category 4 TAC. This material is de minimis based on the TAC % in the raw material as defined in Regulation 5.21, section 2.1.1.

3. This equipment was previously permitted under construction permit 637-07-C.

Insignificant Activities

1) Insignificant Activities are only those activities or processes falling into the general categories defined in District Regulation 2.02, Section 2, and not associated with a specific operation or process for which there is a specific regulation. Equipment associated with a specific operation or process (Emission Unit) shall be listed with the specific process even though there may be no applicable requirements. Information contained in the permit and permit summary shall clearly indicate that those items identified with negligible emissions have no applicable requirements.

2) Activities identified In District Regulation 2.02, Section 2, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source.

3) For all insignificant activities that emit regulated air pollutants for which the company has accepted a *plant-wide* synthetic minor limit, the company shall maintain sufficient records to calculate the emissions and report those emissions in the annual compliance reports.

Equipment	Quantity	Basis for Exemption
Storage tanks - diesel or fuel oil (not for sale)	1	Regulation 1.02, section 1.38 and Appendix A
Brazing, soldering or welding	1	Regulation 1.02, section 1.38 and Appendix A
Lab ventilating (non-radioactive materials)	1	Regulation 1.02, section 1.38 and Appendix A
Portable diesel or gasoline tanks < 500 gal	1	Regulation 1.02, section 1.38 and Appendix A
General Building Maintenance (Painting)	N/A	EPA White Paper
Hog Singer	1	Regulation 1.02, section 1.38 and Appendix A
ALKAR Cooker/Dryer Oven	2	Regulation 1.02, section 1.38 and Appendix A

Fee Comment

1. The Admin Revision fee to include the minimum flow rate for the venture scrubber (C4) is $516.52.
2. The Significant Revision fee to incorporate all the items listed for Revision #7 on the Revision table is $2,582.58

Protocol Checklist for a Performance Test

A completed protocol should include the following information:

- ☐ 1. Facility name, location, and ID #;
- ☐ 2. Responsible Official and environmental contact names;
- ☐ 3. Permit numbers which are requiring the test to be conducted;
- ☐ 4. Test methods to be used (i.e. EPA Method 1, 2, 3, 4, and 5);
- ☐ 5. Alternative test methods or description of modifications to the test methods to be used;
- ☐ 6. Purpose of the test including equipment, and pollutant to be tested; the purpose may be described in the permit which requires the test to be conducted or may be to show compliance with a federal regulation or emission standard;
- ☐ 7. Tentative test dates (these may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation);
- ☐ 8. Maximum rated production capacity of the system;
- ☐ 9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate based on limits);
- ☐ 10.Method to be used for determining rate of production during the performance test;
- ☐ 11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance;
- ☐ 12. Description of normal operation cycles;
- ☐ 13. Discussion of operating conditions that tend to cause worse case emissions; it is especially important to clarify this if worst case emissions do not come from the maximum production rate;
- ☐ 14. Process flow diagram;
- ☐ 15. List the type and manufacturer of the control equipment if any;
- ☐ 16. List the control equipment (baghouse, scrubber, condenser, etc.) parameter to be monitored and recorded during the performance test; note that this date will be used to ensure representative operation during subsequent operations. These parameters can include pressure drops, flow rates, pH, and temperature. The values achieved during the test may be required during subsequent operations to describe what pressure drops, etcetera, are indicative of good operating performance; and
- ☐ 17. How quality assurance and accuracy of the data will be maintained, including;
    - Sample identification and chain-of-custody procedures;
    - Are audit samples required for this test Method (EPA contact number for audit samples 919-541-1062) if yes then please make samples available to the District for observation during the stack test;
    - Audit sample provider;
    - Number of audit samples to be used:
- ☐ 18. Pipe, duct, stack, or flue diameter to be tested;
- ☐ 19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet;
- ☐ 20. Determine number of traverse points to be tested for outlet and additionally for inlet if required using Appendix A-1 to 40 CFR Part 60;
    - Method 1 if stack is >12”
    - Method 1a if stack is between 4” and 12”
    - Alternate method of determination for <4”
    - If a sample location at least two stack or duct diameters downstream and half a diameter upstream from any flow disturbance is not available then an alternative procedure is available for determining the acceptability of a measurement location. This procedure described in Section 11.5 allows for the determination of gas flow angles at the sampling points and comparison of the measured results with acceptability criteria.

Fugitive Dust Control Plan

Air Emission Source	Control Measure
Fugitive dust from truck traffic on unpaved surfaces	Apply oil-based, polymer-based, or similar roadway surfactant annually to gravel areas and areas with significant broken pavement or potholes that are used by Swift's operation. (Note 1)
Fugitive dust from truck traffic on paved surfaces	Swift will minimize dust creation by periodically, water-washing, vacuum-sweeping, or applying surfactant to the paved portions of the lot used by Swift's operation as well as the first 25 feet of roadway in each direction immediately outside of the facility gate (50 feet total). Vacuum sweeping, if performed, shall use ample water except when the use of water would create unsafe conditions, including sweeping events when temperatures are expected to fall below 32°F during the next week. (Note 2)
Fugitive dust from truck traffic on unpaved and paved surfaces	It is the site manager's responsibility to monitor the gravel and paved surfaces and, at his discretion, increase the frequency of the above measures or use a water truck or other measures to wet-down the site surfaces to help prevent particulate matter from becoming airborne beyond the property boundaries. (Note 3)
Diesel engine exhaust from Transportation Refrigeration Units (TRUs)	Limit parking of trailers with operating TRUs to the Northwest quadrant of the site to minimize Impact to neighboring residents.
Diesel engine exhaust from truck engines and Tri- Pacs	Limit parking of trucks that are idling or using Tri-Pacs to areas greater than 100 feet 'from residences. Post signs to discourage unnecessary truck idling.
Diesel engine exhaust from Site's spotter truck	Limit spotter truck idling to no more than 10 minutes before engine must be shut-off.

Note 1: The first application of roadway surfactant shall be made no later than 30 days after LMAPCD approval of this plan. Prior to applying the surfactant, Swift will notify the LMAPCDs Compliance Group of the kind of surfactant to be used and the planned date of the application.
Note 2: The use of water during cold weather will not be required if, based on the site manager's discretion, water use has the potential to create unsafe conditions on the lot or during a periods which rain, freezing rain and/or snow have recently occurred. Notwithstanding this exception, the site manager has responsibility to take reasonable measures to prevent fugitive dust from carrying off-site.
Note 3: The following summarizes the site's current plans/capabilities regarding the required dust control measures: A) vacuum-sweeping, water-truck use, and surfactant application can be contracted to third-party contractors with this experience and equipment. Alternatively, Swift may purchase equipment and self-perform some of these functions. B) Washing and wetting of the paved area adjacent to the 'Washout building" can be performed using hoses and cleaning equipment used for the trailers. The lot surface in this area is adequately sloped toward a drain such that high pressure, high volume water is not required. C) Washing or wetting of the remainder of the lot can either be contracted or, where practical and permitted, performed using high volume hoses connected to nearby hydrants or to on-site water supplies using the numerous connections throughout the site.

End of Document